ABSTRACT OF THE DISCLOSURE

The present invention relates to the methods for hydrophilization, capable of greatly improving the surface wettability of wet surface heat exchangers by transforming the solid surface to an improved surface having hydrophilic porous structure.

In order to form the hydrophilic porous structure on the surface, the present invention provides two methods. One method consists of the operations of making the coating composition by blending micro solid particles with the hydrophilic binders; spreading the coating composition onto the surface of a heat exchanger by means of spraying or dipping; and curing the coated surface of a heat exchanger.

Another method to build the hydrophilic porous structure consists of the operation of roughening the surface of the heat exchanger by corroding the surface chemically or electrochemically, or by use of the physical process; and processing hydrophilization of the surface of said heat exchanger.